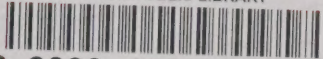


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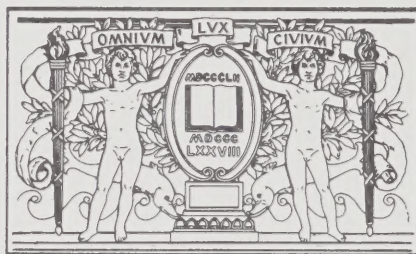
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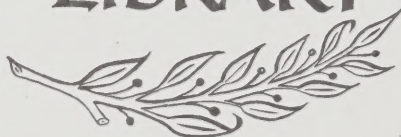
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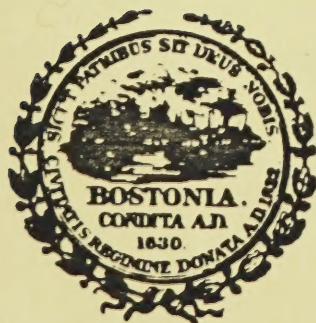




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**Boston's 9-1-1 System**  
**Recommendations For Improvements**  
**In The Emergency Public Safety Response System**



SUBMITTED TO:

Raymond L. Flynn  
Mayor of Boston

SUBMITTED BY:

Mayor's Committee on 9-1-1  
November 1985



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**BOSTON'S 9-1-1 SYSTEM**  
**RECOMMENDATIONS FOR IMPROVEMENTS**  
**IN THE EMERGENCY PUBLIC SAFETY RESPONSE SYSTEM**

SUBMITTED TO:

RAYMOND L. FLYNN  
MAYOR OF BOSTON

SUBMITTED BY:

MAYOR'S COMMITTEE ON 9-1-1

NOVEMBER 1985







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## EXECUTIVE SUMMARY

Late in July, Mayor Flynn requested that a Blue Ribbon Committee be established to examine Boston's emergency response system, determine problem areas and recommend improvements. This document contains the report and recommendations from the 9-1-1 Committee to the Mayor, putting in written form the thousands of hours of research, meetings, and discussions which have occurred.

The "9-1-1 System" is perhaps best described as the point of contact for citizens experiencing an emergency and the public safety agencies charged with their protection. The function appears to be relatively straightforward -- an easily remembered three-digit phone system through which calls for help are funneled and public safety resources are dispatched.

The 9-1-1 system is however much more than computers and telephones, operators and dispatchers. This system represents to many the best, if not the only, point of access connecting the average citizen to the city's public safety resources. As such, the effectiveness of this one system has enormous impact both in terms of public safety response and public peace of mind.

Recognizing the importance of this aspect of Boston's public safety system, the Committee undertook extensive research. Meeting nearly a dozen times over the course of the summer, the 9-1-1 Committee reviewed the current system and its effectiveness for the Police Department, Fire Department and Emergency Medical Services. Conducting national research into 9-1-1 systems in use by other cities, drawing on expertise of well-respected academic members and the extensive work of the private sector, the Committee reviewed "state of the art" systems and debated their applicability to Boston's situation.

This extensive work by the 9-1-1 Committee resulted in three disturbing findings:

- o Boston's 9-1-1 technology was at least ten years out of date and had not been upgraded since 1975 when the Computer-Aided Dispatch system was introduced;
- o Staffing of the 9-1-1 function had not recovered from post "Prop 2 1/2" budget cuts and suffered from inadequate training and poor morale;
- o The 9-1-1 system was suffering from a lack of public understanding and misuse.





The 9-1-1 Committee, comprised of neighborhood residents, public officials, business executives and academics, developed a series of recommendations structured to respond to these problem areas. These are summarized as follows:

- o Enhanced Technology

The City of Boston should purchase and develop state-of-the art emergency response technology including, an Enhanced 9-1-1 telephone system, a new Computer-Aided Dispatch system for Police, Fire and Emergency Medical Services, and introduce use of Mobile Display Terminals;

- o Improved Staffing and Training

The City of Boston should insure adequate staffing at all times for the 9-1-1 function as it relates to Police, Fire and Emergency Medical Services. A comprehensive pre-employment and in-service competency program should be established for all 9-1-1 personnel;

- o Community Involvement

The City of Boston's public safety agencies should develop and implement an aggressive community involvement and education campaign on the use of 9-1-1. These agencies should also incorporate community organizing, crime prevention, arson and emergency care techniques into their training curricula.

It is the consensus of the Committee on 9-1-1 that should the Mayor adopt the recommendations contained within this report that the result will be a dramatic and measurable improvement in the City of Boston's 9-1-1 system and the level of public confidence so important for the effective functioning of Boston's public safety agencies.







CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR  
RAYMOND L. FLYNN

LETTER FROM THE MAYOR

July 19, 1985

Francis M. Roache  
Police Commissioner  
City of Boston  
154 Berkeley Street  
Boston, MA 02116

Dear Commissioner Roache:

To insure that Boston's public safety system serves the City of Boston effectively, I would like to establish a Blue Ribbon Committee to study the current "9-1-1 System", review work which has occurred nationally in this area, and develop recommendations for my review and action.

I would like Peter M. Welsh, Director of the Boston Police Department's Bureau of Administrative Services to serve as this Committee's Chairman. This Committee should be convened immediately and should be representative of the Police Department, Fire Department, and Emergency Medical Services as well as the private sector, colleges and universities and neighborhood organizations. This Committee should be prepared to present its work to me no later than this fall.

The emergency response system is one of the most vital public safety services provided by the City of Boston. I know that you will prioritize this work and I look forward to the results of this Committee's labor.

Sincerely,

Raymond L. Flynn  
Mayor





LETTER FROM THE COMMITTEE

November 1985

Mayor Raymond L. Flynn  
City of Boston  
Boston City Hall

Dear Mayor Flynn:

The attached report provides a series of recommendations which the Committee on 9-1-1 has developed for your review and consideration. This report is the culmination of work achieved by neighborhood representatives, corporate executives, and staff of your public safety departments.

At this time we would like to thank you for allowing us to participate in this project. As individuals and as representatives of various groups within the City we have found it both instructive and gratifying to be able to be of service in this matter. We are also pleased that this represents only the beginning of community outreach efforts on the part of your public safety agencies.

The report which we have developed is structured around three major themes -- Enhanced Technology, Improved Staffing and Training, and Community Involvement. The recommendations which we offer to you are found in detail in each of these sections.

As a Committee we have agreed to remain involved with this project through the period of your deliberations and the initial implementation of your policies by the city's public safety agencies. We look forward to your action on this matter.

Sincerely,

9-1-1- Committee



## INTRODUCTION

### The Need for a Coordinated Public Safety Response

The Mayor's Committee on 9-1-1 has examined in detail the issues, concerns and workings of the City of Boston's emergency response system. In the course of the Committee's deliberations, there developed two basic agreements which served as the underpinning for the group's discussions and recommendations.

The first basic agreement developed by the Committee was that the 9-1-1 system and its improvements should be considered to be an aspect of the city's overall emergency service provision -- incorporating the work of police, fire and emergency medical services. Although recent public attention has reinforced the view that the 9-1-1 function is the point of contact for the public and the police department it is the Committee's contention that this perception must be altered. The report that follows embraces all aspects of the city's public safety response system as it relates to the 9-1-1 system.

The second agreement is best presented as a statement.

The effectiveness of Boston's public safety departments is dependent upon a good working partnership with the neighborhoods and the residents of Boston.

This simple statement -- that community and government must come together to achieve public safety -- has in fact served as the foundation of the proposals offered by the Mayor's Committee on 9-1-1.

The Committee on 9-1-1 was convened to examine a particular aspect of public safety and procedure. Many members of the Committee have concerns which range beyond the specifics of the 9-1-1 system, and yet the Committee as a whole felt comfortable maintaining a relatively narrow scope of inquiry and commentary. This was due to the their conviction that the Mayor, the Police Commissioner, the Commissioner of Health and Hospitals, and the Fire Commissioner understand and are committed to this cooperative approach.

On many occasions the Flynn Administration has demonstrated their commitment to the belief that the strength of Boston's neighborhoods will and must provide the foundation for all agencies seeking to serve its residents -- foremost among them those charged with maintaining the city's public safety.





The improvement of the 9-1-1 system -- the point of emergency citizen contact and public safety deployment -- is not then simply a matter of upgrading equipment or improving training techniques. Rather it is dependent on both sides of an often fragile relationship -- that of the citizen and the public safety agency. Acknowledging the importance of this relationship is the starting point for the public safety agencies which must bear the burden of outreach, interaction and involvement -- the steps necessary to build public trust and confidence.

The 9-1-1 Committee has developed recommendations which, if implemented, will enable the Boston Police Department, Fire Department and Emergency Medical Service to greatly improve their ability to react in emergency situations and resolve acute public safety problems. We are pleased at evidence that these agencies are working to improve their analytical capabilities, strengthen relationships with the neighborhoods, and involve other public and private agencies in problem solution.





## I. COMMITTEE ON 9-1-1

### Mayoral Request

On July 19th of this year, Mayor Raymond L. Flynn announced the creation of a blue-ribbon panel to investigate the current 9-1-1 system in use in the City and to recommend to him areas of improvement. Coming on the heels of a perceived problem in the 9-1-1- system, this Committee was asked to explore technological and operational aspects of the 9-1-1 system.

The panel was convened on July 26th and was chaired by Peter M. Welsh, Director of the Department's Bureau of Administrative Services. The composition of the panel was developed to reflect various concerns and experience of Boston's neighborhoods, police department representatives, communications executives, and academics.

### 9-1-1 Committee Agenda

In the Committee's first meeting the agenda and timetable were established. It was agreed that the Committee would comment on 9-1-1 operations as they pertained to the areas of Technological Improvement, Staffing and Training, and Community Awareness. To accomplish this work the Committee agreed to meet regularly during August and September and as often as needed in sub-group sessions.

During the course of the Committee's deliberations it became clear that the Committee could play an invaluable role in the implementation and oversight of the proposed changes in this aspect of the City's public safety operations. It was therefore decided that the Committee on 9-1-1 would strive to complete its report to the Mayor by the end of October, but would remain in tact as a body to provide ongoing guidance and support to the Mayor and the public safety departments during the implementation phase of the project.



9-1-1 Committee Membership

Sally Birch

Albert P. Cardarelli, Professor

John J. Coleman, Vice Pres/Mass

Paul Conway, Lieutenant

John Cullinane, President

Robert Dunford, Lieutenant

John A. Gifford, Supt-in-Chief

Bill Good, Executive Assistant

George Kelling, Professor

Dave Kitchens, Dispatcher

Michael Mangini, Director

Robert McCarthy, Captain

David McGinn, Manager

David Mugar, President

Mary Nee, President

Dennis Nowicki, Deputy Supt

Steve O'Rourke, Director

Glen Pierce, Assoc. Director

Willis Saunders, Deputy Supt

Allan Stern, Director

Dave Troup, Director

Peter Welsh, Director

Paul White, Representative

Chrisley Wood

Jones Hill Association

McCormack Institute/U Mass

New England Telephone

Operations, BPD

Cullinet Software

Police Academy, BPD

Boston Police Department

Boston Police Department

Harvard & Northeastern Univ

Boston Police Department

Emergency Medical Services

Boston Fire Department

Govt Relations, Cullinet

Communications Corporation

Capital Planning/Boston

Chicago Police Department

Emergency Medical Services

Ctr for Applied Research/NU

Boston Police Department

City of Boston M.I.S.

Communications Mtnce, BPD

Bureau Admin Services, BPD

House of Representatives

JRI/N'hood Crime Prevention





## II. BOSTON'S 9-1-1 SYSTEM: HISTORY AND BACKGROUND

### History

Following a late 1960's report from the President's Commission on Law Enforcement and the Administration of Justice, Boston joined the ranks of cities striving to better provide police services to residents in emergency situations. The Boston 9-1-1 system was put in place in November of 1972.

The first application of the 9-1-1 in Boston was a far cry from the current operation. From 1972 until 1975 the system relied on operator determination of call priorities, color coded cards and the use of a conveyor belt to physically move the cards from the Operators to the Dispatchers.

In 1975 Boston introduced the use of Computer Aided Dispatch (CAD). The use of the CAD radically changed the functions of both the 9-1-1 Operators receiving the calls as well as the Dispatchers interacting with the patrol units. Some of the key operational changes included: reduction of data entry, automatic address verification, obsolescence of the complaint cards, and computerized patrol sector determination.

When reference is made to the current "9-1-1 System" it must be understood that this incorporates three components which taken together constitute the **emergency communications system** used by the Boston Police Department, Fire Department and Emergency Medical Services. These three components are:

- (1) 9-1-1 telephone system;
- (2) Computer aided dispatch system (CAD);
- (3) Radio communications system.

### **9-1-1 Telephone System**

9-1-1 is a three digit telephone number that can be dialed when in need of emergency police, fire or medical help. Implemented on a national basis by American Telephone and Telegraph in 1968 it is estimated that there are nearly 800 such systems in operation across the country providing service to nearly one-fourth of the country's population.





As initially devised by AT&T, the phone company provides the number, but does not in fact answer the calls. That remains the responsibility of the local public safety agency.

In Boston the 9-1-1 function is assigned to the Operations Division of the Bureau of Field Services and is the responsibility of Superintendent James M. MacDonald. The unit operates with a combination of uniformed and civilian personnel managed via a chain of command which includes two or three Sergeants per shift and a Lieutenant who reports to the Superintendent. Line personnel include both Operators and Dispatchers.

Boston's 9-1-1 calls are initially answered by personnel located in police operations, "the Turret". Calls for police are entered into the CAD system by the Operator, calls of a medical nature are immediately transferred to trained EMS personnel for CAD entry, and calls for fire are immediately transferred to fire alarm. A taped record of all calls is automatically made.

The Operators are civilians, including a staffing complement of 70 individuals who handle calls in round-the-clock shifts covering fourteen 9-1-1 consoles and thirteen non-emergency lines and positions. The Operators take the calls, prioritize them, and move them to the appropriate Dispatcher who is part of the uniformed branch of the Department. At any one time there are six Dispatchers on duty -- one for each of the five policing areas and one for inquiries from the field. It is the Dispatcher's responsibility to transfer the information to the first available unit to insure that the police intervene in the situation.

Calls which come in for the fire department are immediately routed to the Alarm facility located in the Fenway where four to six Operators assess the scope of the emergency and handle fire department deployment. Emergency medical service personnel are co-located in the Turret at Berkeley Street and handle medical deployment with staffing of a Supervisor, two Operators, one Dispatcher and a C-MED Operator (Central Medical Emergency Direction). This last position is one which is required to insure communication between and among the ambulance, hospital, physician or any combination the situation necessitates.



Under pressure, frequently taking calls from distraught citizens, these personnel must glean from the caller the information that will enable them to get to the exact address of the incident, categorize the situation and prioritize the call. Frequently this means leading the caller with questions about the situation while determining the placement of the call. If the caller can provide an exact address or cross-street the computer will aid the Operator in sorting the call to the correct Dispatcher. If a caller cannot provide enough identifying information the operator will work with maps and reference guides to determine street location. At any point a call may be put on a loudspeaker, allowing the Operator to receive supervisory assistance and immediately alerting Dispatchers of a pending priority.

### **Computer-Aided Dispatch (CAD) System**

At the present time the Computer-Aided Dispatch is being used only by the Boston Police and the Emergency Medical Services. The system was originally designed in the early 1970's as a police dispatch system. At the point that the EMS co-located with police operations they adapted the police CAD for their own use.

The CAD's function is to assist the operator in the handling and documentation of each call for police and/or EMS assistance. The system automatically verifies the address from the geobase file, routes the call to the appropriate dispatcher, recommends response units and maintains vehicle or unit status on a CRT screen. The present CAD is a first generation system. The hardware it operates on is old in both years and technology.

### **Radio Communications System**

The radio communications system currently operating in the Boston Police Department is one which has undergone very recent change, implemented this past summer during the time period of this Committee's deliberations.

As has been mentioned previously, the current CAD system has verified the address, assigned the call to the appropriate Dispatcher and identified the available response unit. The dispatcher insures that the call goes out and that appropriate information is relayed to the units responding.





Until this past summer the Boston Police Department utilized seven Dispatchers in round-the-clock shifts. Five Dispatchers were assigned to patrol channels relating to the policing areas of the city; the remaining two Dispatchers handled the North and South Rapid Response zones. The Rapid Response cars received on their own channel and handled the priority calls coming in to the Department.

This summer this dispatch system was changed. Rapid Response units are now dispatched by area rather than on their own channel. This allows the department to get Priority 1 calls out to all available units immediately, rather than relying on two separate dispatches as had been the case. The system now in place utilizes five Dispatchers who operate with a ten channel system:

<u>Channel</u>	<u>Function</u>
1	Citywide Tactical (events, special projects)
2	Area A
3	Area B
4	Area E
5	Area D
6	Area C
7	Car-to-Car/ Report Back
8	Inquiry
9	Investigative
10	Administrative

### 9-1-1 Current Public Usage

In 1984 the Boston's 9-1-1 telephone system received 914,000 calls. The Committee, as part of their examination of the current demands on the system reviewed the types of calls, the distribution of calls over time of day and day of week.





In studying the public use of the 9-1-1 phone system, the Committee found it useful to categorize the requests into four broad categories:

- (1) Public safety related emergencies, requiring the immediate dispatch of public safety response units;
- (2) Public safety related non-emergencies which require public safety services but do not require immediate attention;
- (3) Non-public safety related requests for service that are the responsibility of other city or state agencies;
- (4) Requests for service or assistance that are not the responsibility of the city (e.g., what is tomorrow's weather forecast?)

As the above categories indicate, not all requests for assistance received via the 9-1-1 system are directly related to public safety problems (see Chart I). Last year 114,407 calls or 12.5% of all calls received were outside of the responsibility of the public safety agencies and the City of Boston. These calls, termed "frivolous" by the committee included requests such as "When does Filene's open?," "What time is it?," and "When is the Red Sox opener?". The city clearly is not the place to obtain this type of information, and such requests represent an unnecessary burden on public safety resources.

The 9-1-1 phone system also receives a substantial number of requests for assistance (405,627 or 44.4% in 1984) that are again not related to public safety but could be considered the responsibility of other city agencies or departments. Such requests include questions about garbage in the street, hazardous road conditions, and complaints about schools or other public services. In these instances, the 9-1-1 Operators inform the citizen that their problem is not a public safety issue, and then refer them to the appropriate city agency.

The final two categories of 9-1-1 calls the committee examined are those relating directly to requests for assistance requiring the provision of police, emergency medical or fire department services. Of these two categories, approximately 25.9% or 236,379 calls represented public safety related problems that did not require immediate delivery of services. Such requests typically include situations where a citizen is calling to report a larceny that occurred the day before, a noisy party, or a missing auto. Such situations of course represent serious concerns to citizens but do not usually require or benefit from the immediate provision of public safety services which a life-threatening situation requires.



Finally, requests for assistance requiring the immediate provision of public safety services represented approximately 17.2% (157,586) of the 914,000 calls received. Such requests typically represent emergency situations such as a crime in progress, a car accident, or a fire. It is probably true however, that the current system treats some situations as emergencies when they really do not represent an immediate threat to the well-being of a citizen. Thus the 17.2% figure may somewhat overestimate the true proportion of emergency situations.

Even as 9-1-1 calls vary by type of request there are also important variations regarding the time of day and day of week that calls come in.

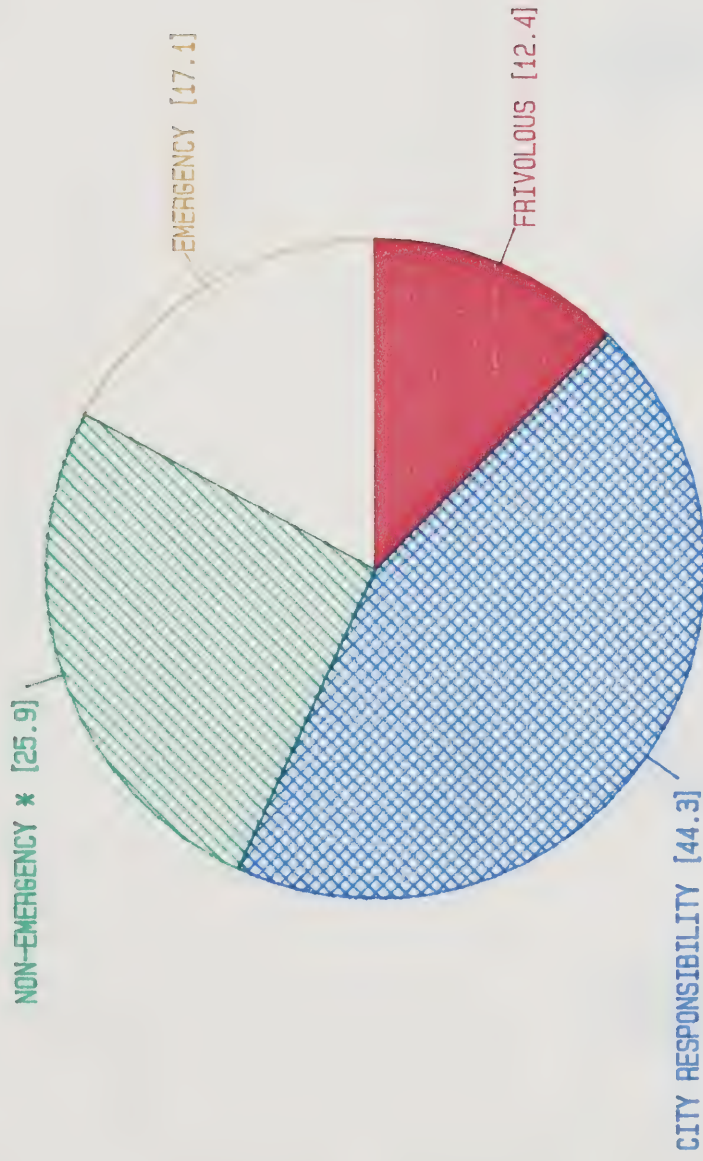
As is shown in Chart II there is substantial variation by day of the week. The calls tend to peak on the weekend, dipping through the week to a low period on Wednesday and Thursday. During the period examined (Third Quarter 1985) the 9-1-1 system received approximately 12% more calls on the weekend than during the Wednesday-Thursday period. (2425).

An even greater variation in public usage (and staffing demand) is apparent when the calls for assistance are examined by time of day. Chart III represents the average hourly number of 9-1-1 calls for service by time of day for the Third Quarter 1985. During this period the 9-1-1 system averaged approximately 175 calls between 10:00 - 10:59 p.m. as opposed to only 30 calls during the period of 5:00 - 5:59 a.m.





BOSTON POLICE DEPARTMENT  
BREAKDOWN OF 911 CALLS IN 1984  
TOTAL VOLUME OF CALLS = 914, 000

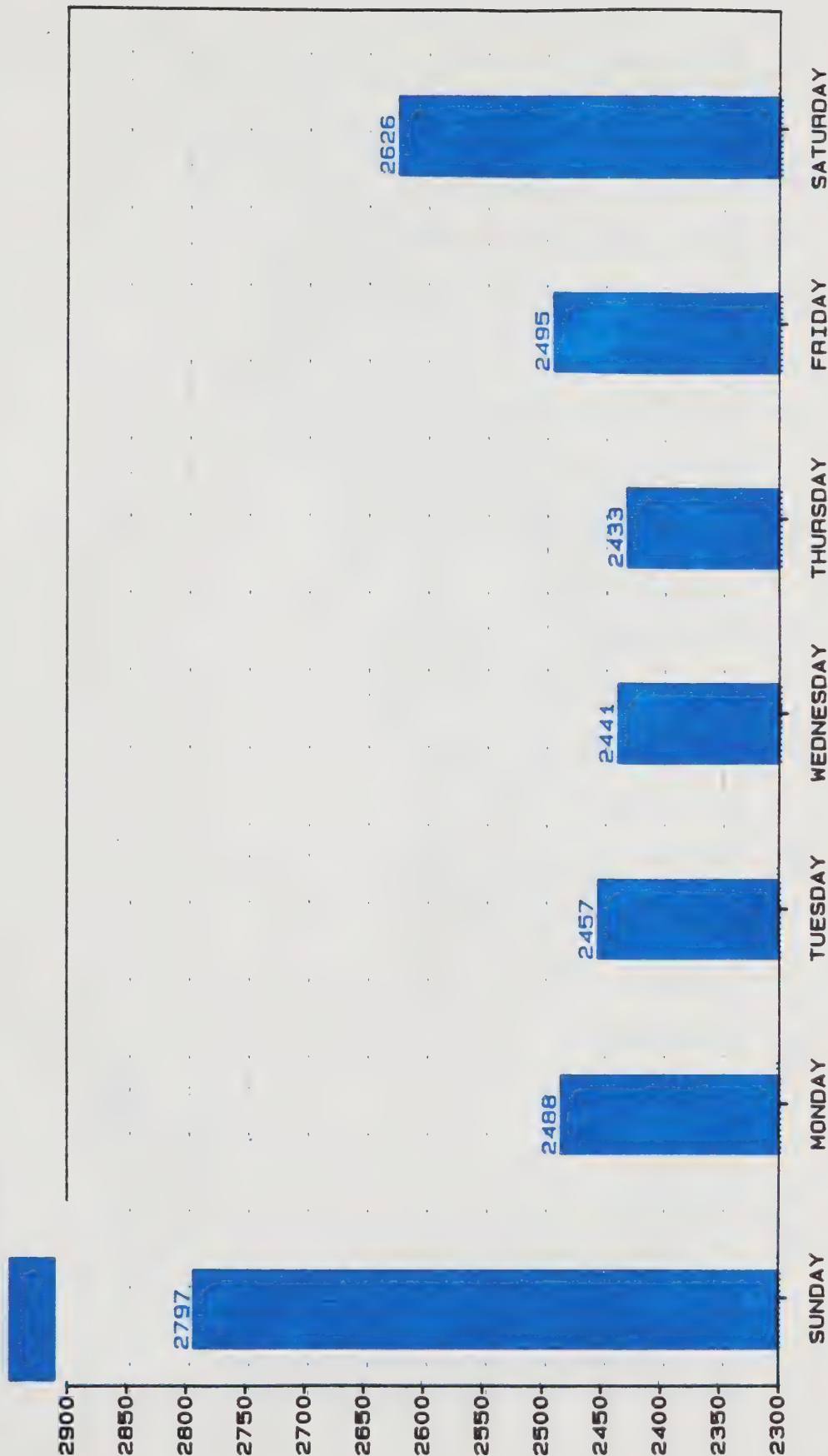


\* REQUIRING POLICE, EMS, OR FIRE RESPONSE



BOSTON POLICE DEPARTMENT  
AVERAGE 911 CALLS RECEIVED BY THE DAY FOR THE  
PERIOD OF JUNE 1ST - AUGUST 31ST

AVERAGE CALLS



CALLS

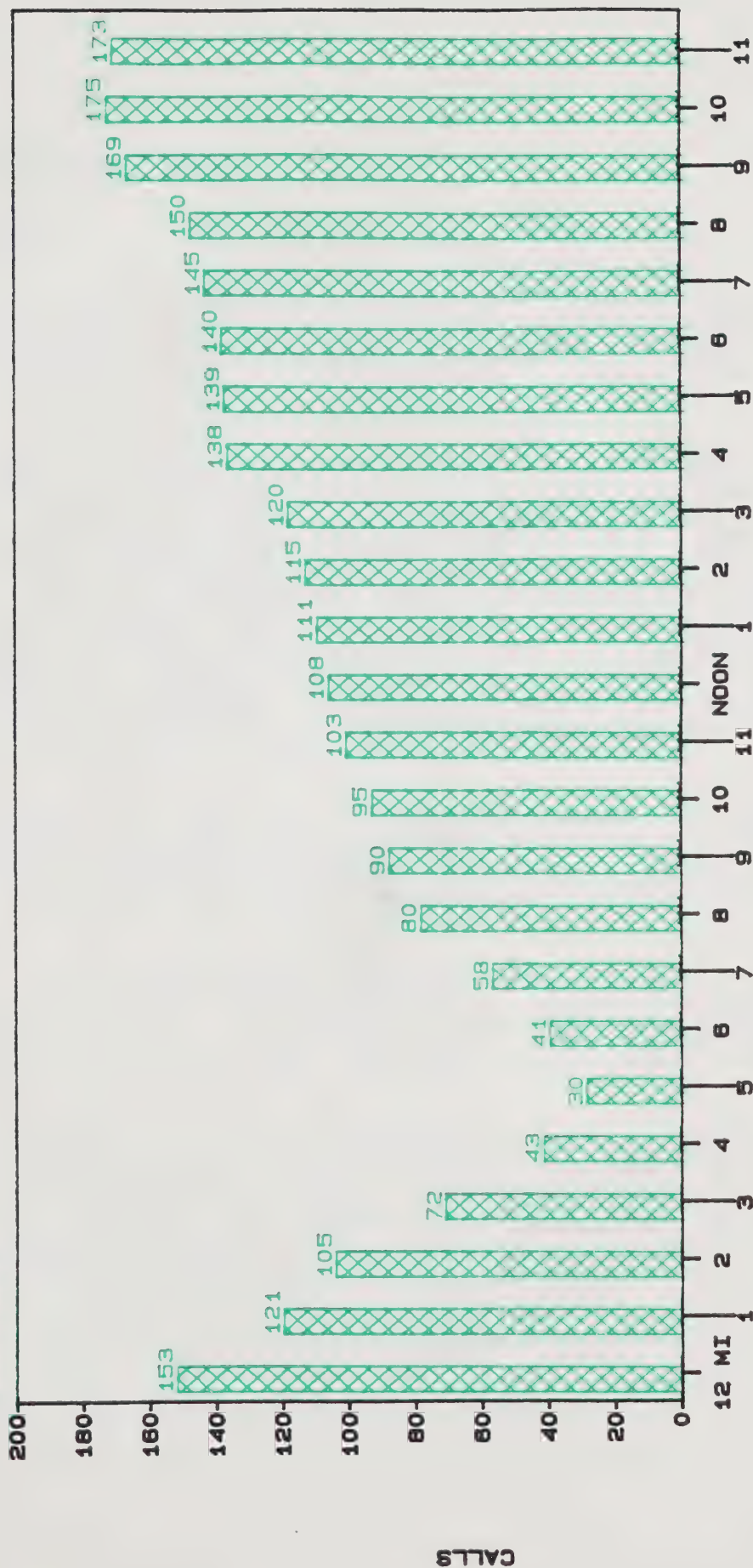
DAY





# BOSTON POLICE DEPARTMENT AVERAGE 911 CALLS RECEIVED BY THE HOUR FOR THE PERIOD OF JUNE 1ST - AUGUST 31ST

AVERAGE CALLS



HOUR

NOTE: 12 MID - 1 A.M.



### III. COMMITTEE RECOMMENDATIONS

#### ENHANCED TECHNOLOGY

In the ten years since the Boston 9-1-1 System was put in place, major technological advances have occurred and are now available to Boston. These advances span the three areas previously described -- the telephone system, the CAD system, and the method of call dispatching.

A new 9-1-1 system called Enhanced 9-1-1 (E9-1-1) provides an additional capability over the basic 9-1-1 system. One major benefit of the Enhanced system is that the caller's address and telephone number are immediately displayed for the 9-1-1 Operator. This Automatic Number Identification (ANI) enables calls to be successfully answered from people who cannot provide their address due to language, medical condition, fire or other circumstance. Another innovation with the E9-1-1 system is that of the Automatic Location Identification (ALI). Other elements of the E9-1-1 system include correction for problems that occur where the telephone company exchange boundaries do not exactly coincide with the city's boundaries.

An important aspect of the E-9-1-1 implementation is that of confidentiality. The public safety agencies must insure that this information is used solely for emergency intervention. The public must also be reassured of agency sensitivity to this important issue.

In the area of Computer Aided Dispatch there have also been advances. Software is now available that will allow for expanded police use of the CAD while providing a sub-program designed for Emergency Medical Services, and for the first time, the Fire Department.

Perhaps the most exciting area of technological improvement relates to that of call dispatching. While the past few years have seen only limited improvements in radio communications a major enhancement using Mobile Data Terminals (MDT) in police vehicles is ready to be implemented. These terminals would enable the officer on patrol to access information stored in several local and national law enforcement data bases. Furthermore, these MDT's would assist supervisory personnel to monitor area deployment from a cruiser rather than a stationary terminal located at an area command. MDTs would also prove of benefit to certain of the Emergency Medical vehicles where display of previous calls to a location or specific medical information could be called-up.





Even as the Committee has reviewed advances in technology available for public safety, attention has also been given to altered uses of the technology currently in place. As was mentioned elsewhere in this report, one alteration was already made this past summer in the radio dispatching method, resulting in immediate broadcasting of Priority 1 calls to all available units, rather than just the Rapid Response vehicles. Other possible innovations which could be made include: the implementation of two secure voice radio channels for sensitive police information; implementation of a citywide combined radio system for other public safety and public service departments to improve communication both during daily operations as well as emergency situations.



## RECOMMENDATIONS: ENHANCED TECHNOLOGY

As a result of our review of the current 9-1-1 system and the available innovations which have been made in the technology, the Committee has developed the following recommendations for action by the Mayor and the Police Commissioner:

- o The City of Boston should purchase and develop a new enhanced Computer-Aided Dispatch system for Police, Fire and Emergency Medical Services;
- o The City of Boston should introduce, either alone or in conjunction with surrounding communities, an Enhanced 9-1-1 telephone system;
- o The Boston Police Department should, in conjunction with the Fire Department and Emergency Medical Services, conduct a feasibility study to examine the benefits and liabilities of establishing a central Emergency Operations Center;
- o The Boston Police Department should expedite a pilot project utilizing the Mobile Data Terminals, with a commitment to assess the value of such a system and expand to all emergency service units should the pilot prove successful;
- o The Emergency Medical Service should pilot the use of Mobile Data Terminals;
- o The Boston Fire Department should expedite a project which will locate computer terminals in each station-house, increasing the Department's ability to obtain vital information;
- o The Boston Police Department should, in conjunction with the Fire Department and the Emergency Medical Service examine the potential use of CAD data for the forecasting of public safety problems in the area of crime, fire and health emergency;
- o The Boston Police Department should investigate the benefits of implementing a vehicle locator system to aid in rapid deployment;
- o The City of Boston should purchase an 800 MHZ public safety trunking system to provide reliable and coordinated communications for routine, special and emergency operations for all city departments which can be interfaced with an Emergency Operations Center.





## IMPROVED STAFFING AND TRAINING

### Staffing Changes

One of the first areas of Committee review was that of the staffing the Police Department's Operations Division in regard to the 9-1-1 function. A review of this aspect of the operation indicated that much groundwork had already been laid by a pilot project undertaken by the Flynn Administration in cooperation with the Service Employees International Union (SEIU).

This project, termed the "Quality of Worklife Program" began in January in two critical areas of city services -- one of which was the Police Department's aspect of the 9-1-1 function. The project is one in which the worksite staff is encouraged to meet weekly as a group and monthly with the department's upper management. These meetings serve both to air issues as well as mutually arrive at the solutions to problems. During the course of this project, a great number of staffing issues have been identified, including: staffing, recruitment, increased bilingual staffing, staff training, employee recognition, career ladders and compensation.

The Committee is pleased to have found that this project was well underway at the point of our review. Their recommendations, which will be discussed in detail below represent a thoughtful cooperative approach on the part of staff and management and are endorsed by the 9-1-1 Committee.

The issue of staffing capacity is one which has engendered much discussion within the 9-1-1 Committee. As a 24-hour per day, seven day per week function, insuring sufficient staffing at all times for the 9-1-1 responsibility is difficult. Earlier this year the Police Department's staffing had dipped below 70 and was very reliant on the rotation of Police Cadets through the Turret to bolster the numbers. The fiscal year 1986 budget submitted by the Department called for 88 operators whose work would be augmented by 10 Police Cadets. This is a substantial increase and one which should allow for adequate staffing.

Beyond the question of numbers however is that of staffing flexibility given high and low demand periods. This is a function where the peak periods are relatively predictable yet the staffing patterns do not always correspond to the variations. The potential remains for the Police Department to experiment with part-time staff and overlapping shifts.

The use of the Police Cadets to augment staff is a practice which must be limited. At this time the number of Cadets assigned is ten. Their responsibilities should be limited to back-up (non-emergency) telephone lines and non-telephone duties within the Turret.



Hiring additional staff and limiting use of Police Cadets, will not in and of itself insure effective operation of the 9-1-1 system. One area explored by the Quality of Worklife project is the 9-1-1 function. The benefits of this approach are clear -- an altered staffing pattern can increase on-site supervision even as it serves to more accurately reward and recognize superior staffwork. The Work-Site Quality circle and the Police Department administration have agreed on the following staffing alterations:

- (1) Upgrading of the Civil Service rating for emergency Operators to reflect the responsibilities of the position;
- (2) Establishment of a position of Senior Emergency Operator to improve on floor supervision and control;
- (3) Establishment of a position of Emergency Operator Trainee which will be probationary and from which a person will either be promoted or dismissed based upon performance on the job.

It is the Committee's understanding that the actions required to implement the above have already been initiated by the Department's Personnel Division.

An examination of the staffing of Operators and Dispatchers for the the Emergency Medical Service as well the Fire Department indicated that there was room for improvement there as well. The Fire Department indicated that their current complement of 25 personnel allowed for a maximum of six per shift and that the workload would be better distributed among seven per shift or a total of 28 personnel. The Emergency Medical Service operates with fourteen personnel spread over three shifts. Emergency Medical Service management indicates that the addition of one more position on the day shift would be preferable.

### **Improved Training**

Having established both an adequate number of staff and an appropriate career ladder, it is essential that the Police Department address the issue of training for the emergency Operators, Dispatchers, and Supervisors.

The present system of training is primarily conducted on-the-job. The Committee recommends that the Department establish an intensive training program for new operators to be conducted at the Police Academy prior to handling any calls in the Operators Unit. The curriculum should include familiarization with the geography of the city, simulation of calls on the console at which the Operators will work, stress management techniques, and all rules and procedures for Operations.





In addition to training for new operators, the Committee recommends comparable training for new Dispatchers and supervisors to insure that all personnel assigned to Operations are as well trained as possible, The Committee strongly advocates regular in-service training for all employees and the development of a formal standardized curriculum for both preliminary and in-service training and the development of an operations manual for all employees in Operations.

The Committee urges the development and adoption of the curriculum and related materials as soon as possible, but in any case within the next ninety days. The Committee also supports the recommendation of the Work Site Quality Circle for the position of Training Officer to continue the training of the Emergency Operator Trainees when they begin work in Operations.



## RECOMMENDATIONS: IMPROVED STAFFING AND TRAINING

In summary, the Committee recommends the following in the area of staffing and training:

- o The Boston Police Department should increase the number of Emergency Operators to 90 and assign 10 Cadets to handle the non-emergency lines and to serve as back-up staff to the Emergency Operators;
- o The Boston Police Department, in conjunction with New England Telephone, should perform an analysis of the calls handled through the 9-1-1 system and consider staffing options such as part-time help and overlapping shifts to effectively manage during peak time periods;
- o The Boston Police Department should establish a career ladder within the 9-1-1 unit by upgrading the rating for the position of Emergency Operator and adding the positions of Senior Emergency Operators and Emergency Operator Trainee;
- o The Boston Police Department should develop a comprehensive pre-employment training program for new Operators, Dispatchers and Supervisors, and in so doing should utilize the resources of the Boston Police Academy;
- o The Boston Police Department should develop an in-service competency and training package for current employees of the Operations Division;
- o The Department of Health and Hospitals should take steps to implement recommendations received from a recent New England Telephone study of their aspect of 9-1-1 staffing;
- o The Fire Department should review their staffing of the 9-1-1 function and maintain appropriate coverage for each shift;





## Community Involvement and Cooperation

As was discussed in the Introduction to this report, improvements in the City's 9-1-1 system rely both on the public as well as the public safety agencies. It must be understood that the public safety agencies rely on appropriate use of the 9-1-1 system as well as on the accuracy of the information provided by the public. This understanding on the part of the public must translate into increased responsibility on the part of Boston citizens -- responsibility to make use of the system and to do so conscientiously. In the preceding chapters we have discussed areas in which the public safety agencies can increase their ability to respond when called. At this time our attention turns to the other side of the telephone line.

How to insure that the 9-1-1 function is used appropriately? This question really has two meanings. First, are there methods that can be employed to reduce the non-emergency use of this telephone line? Second, are there steps that can be taken to restore public confidence and insure that 9-1-1 is unhesitatingly used in real emergency situations. The Committee has debated both aspects of this question quite thoroughly.

Regarding non-emergency usage, Committee research has revealed that other parts of the country have undertaken extensive campaigns to encourage use of 9-1-1 solely for emergencies. This activity has been aided by the establishment of a second non-emergency telephone number and has been implemented along with major public relations campaigns. The success of this work is, we are told, time-limited. As the public relations campaign faded the number of non-emergency calls into 9-1-1 began to climb once again.

Even as the Committee has debated whether it is possible to alter usage, we have spent time examining whether this alteration was actually preferable. Some members expressed concern that such a campaign could delay or depress emergency calls by creating doubt in the mind of the caller. Other members expressed concern that a back-up telephone number (in or outside of the public safety agency) could diminish the agency's ability to respond, moving the problem one step further from the public safety department's deployment system. Other members have indicated concern that such a back-up number would require round-the-clock staffing (and budget) yet might not actually take the weight off of the 9-1-1 function.



The Committee determined that this debate need not be resolved until further down the road of 9-1-1 improvement. During the course of the debate however it became clear that there are many calls coming in to the 9-1-1 line which are not emergency and which are not even public safety related. As is referenced elsewhere in this report, of the nearly 914,000 calls that come into 9-1-1 each year in Boston the vast majority are considered to be non-emergency, and of this number, a large portion are considered to be beyond the concern of the city's public safety agencies. The latter category includes informational calls ranging from inquiries about whether the Red Sox are playing to the hours of Filene's.

Regarding the "non-emergency" but public safety related calls there appears to be a problem of competing definitions. The public safety agencies have one understanding of emergency, the public has yet another. Calls reporting an abandoned car or a group of kids congregating on a street stop short of an emergency but still fall within the realm of public safety. Calls reporting a burglary a few hours old are much more difficult and begin to reveal the differences in emergency definitions. With this call we have moved into the realm of a criminal action, but the fact that the crime is already over is our point of departure. The public safety agency considers this a low priority. But for the caller the fact that the crime is "over" is somewhat of an abstraction. For the citizen making the call, the emergency is felt at the point that they enter their home or place of business. Will we ever convince this person to call another number? Do we want to?

The Committee has indicated that it would like to see calls classified roughly in four categories:

- (1) Public Safety -- Emergency  
(e.g.) Crime in progress, Violent crime,  
Life-threatening or Acute medical situation,  
Fire
- (2) Public Safety -- Not an emergency  
(e.g.) Stolen car, Burglary discovered  
after-fact, Simple fracture, Early labor
- (3) Not Public Safety -- Not an emergency -- City-related  
(e.g.) Broken street light, Medical Transport  
sought, Abandoned building not boarded
- (4) Frivolous -- Not City related  
(e.g.) When does Filene's open?

The first two categories would continue to be handled and actively routed through the 9-1-1 system. The latter two categories would be discouraged with the option that in the area of city-related calls the Flynn Administration might consider developing more extensive phone service for the public.





The Committee felt it was important not to lose sight of the need to build confidence in the 9-1-1 system and felt it was important to change the method of call handling rather than aggressively seeking to change the calls coming in. While it was also agreed that it would be helpful to reduce the extraneous calls for "information" rather than "emergency" any campaign undertaken by the City must stress that if there is any doubt in the citizen's mind that they should err on safety's side and call into 9-1-1.

It was also agreed that the public safety agencies need to develop a better method of communicating to the public how they have classified their call, why they have done so, how the public safety agency will respond and when the caller can expect to see the public safety agency on the scene.

An equally important task of the public safety agencies is to develop additional points of access for the community. As long as dialing 9-1-1 appears to be the only reliable connection between the public and the public safety agencies it will continue to be burdened with a variety of requests and reports. While the addition of a non-emergnecy number may help, the longer-range strategy must be for the agencies to develop an extensive community relations campaign which has as its objective a substantially increased number of contacts between citizens and public safety officials.

These strategies can be broad in their scope and can range from media contact to community meetings; from printed brochures and leaflets to Public Service Advertisements; from participation in neighborhood fairs and celebrations to programs that educate school children. The unifying theme of all of these suggestions is that the public safety agencies make themselves more accessible and in so doing demystify the process of crime-reporting, information sharing, neighborhood crime prevention as well as emergency procedures.



## RECOMMENDATIONS: COMMUNITY INVOLVEMENT AND COOPERATION

The Committee recommends the following in the areas of Public Perception/Usage and Community Involvement:

- o Boston's public safety agencies should develop and implement an aggressive public safety education campaign with particular emphasis on use and expectations regarding the City's 9-1-1 system;
- o Public safety agencies should hold well-publicized district meetings with the citizens, businesses and community organizations during which key information is shared and the community is involved in cooperative problem-solving;
- o Public safety agencies should incorporate community organizing and community crime prevention, community fire prevention, and fire prevention techniques into the departmental curriculum as well as in-service training programs;
- o The public safety agencies should develop performance measurements and report to the Mayor and the public on a regular basis on their performance by district. These performance measurements should be designed to include discussion of problems of particular relevance to specific neighborhoods and policing areas;
- o The city administration should consider instituting an expanded "non-emergency" telephone service to reduce the non-public safety demand on the 9-1-1 system.



















